L Number	Hits	Search Text	DB	Time stamp
1	28	(DNA near2 adduct) near8 antibody	USPAT; US-PGPUB; EPO; DERWENT	2004/10/25 15:03
2	933	DNA near2 adduct	USPAT; US-PGPUB; EPO; DERWENT	2004/10/25 15:03
3	18	(DNA near2 adduct) near10 alkylation	USPAT; US-PGPUB; EPO; DERWENT	2004/10/25 15:04

L Number	Hits	Search Text	DB	Time stamp
1	28	(DNA near2 adduct) near8 antibody	USPAT; US-PGPUB; EPO; DERWENT	2004/10/25 15:03
2	933	DNA near2 adduct	USPAT; US-PGPUB; EPO; DERWENT	2004/10/25 15:03
3	18	(DNA near2 adduct) near10 alkylation	USPAT; US-PGPUB; EPO; DERWENT	2004/10/25 15:24
4	850	DNA same antibody same protect	USPAT; US-PGPUB; EPO; DERWENT	2004/10/25 15:25
5	0	(DNA same antibody same protect) same (2' or 3')	USPAT; US-PGPUB; EPO; DERWENT	2004/10/25 15:33
6	0	("2002045167").PN.	USPAT; EPO	2004/10/25 15:33
7	0	("20020045167").PN.	USPAT; EPO	2004/10/25 15:33
8	1	("20020045167").PN.	USPAT; US-PGPUB; EPO	2004/10/25 15:47
9	10	DNA same (benzoyl or isobutryl or isopropylphenoxyacetyl or bz or ibu) same antibody	USPAT; US-PGPUB; EPO; DERWENT	2004/10/25 15:48

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=> DNA(5A)antibody
L1         8833 FILE CAPLUS
L2         4332 FILE BIOTECHNO
L3          111 FILE COMPENDEX
L4           72 FILE ANABSTR
L5            0 FILE CERAB
L6            1 FILE METADEX
L7        15311 FILE USPATFULL

TOTAL FOR ALL FILES
L8        28660 DNA(5A) ANTIBODY

=> DNA(5A)antibody(8A)(protecting or protection)
L9           26 FILE CAPLUS
L10          11 FILE BIOTECHNO
L11           1 FILE COMPENDEX
L12           0 FILE ANABSTR
L13           0 FILE CERAB
L14           0 FILE METADEX
L15          16 FILE USPATFULL

TOTAL FOR ALL FILES
L16          54 DNA(5A) ANTIBODY(8A)(PROTECTING OR PROTECTION)

=> d l9-l10
'ACC' IS NOT VALID WITH MULTIFILE PROCESSING

DISPLAY ACC is not allowed in a multifile environment.  Enter
"DISPLAY HISTORY" to locate the file the L# was created in, use the
FILE command to enter that file, and re-enter the DISPLAY ACC
command.

=> dup rem
ENTER L# LIST OR (END):l9-l10
PROCESSING COMPLETED FOR L9
PROCESSING COMPLETED FOR L10
L17          30 DUP REM L9-L10 (7 DUPLICATES REMOVED)

=> l17 and py<2002
L18          26 S L17
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L19          19 FILE CAPLUS
L20           4 S L17
L21           4 FILE BIOTECHNO
L22           0 S L17
L23           0 FILE COMPENDEX
L24           0 S L17
L25           0 FILE ANABSTR
L26           0 S L17
L27           0 FILE CERAB
L28           0 S L17
L29           0 FILE METADEX
L30           0 S L17
L31           0 FILE USPATFULL

TOTAL FOR ALL FILES
L32          23 L17 AND PY<2002

=> d l32 ibib abs total

L32  ANSWER 1 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2002:472269  CAPLUS
DOCUMENT NUMBER:          137:261530
TITLE:                    Influenza HA DNA induces Th1 cells and protection
                          despite limited antibody responses
AUTHOR(S):                Johnson, Patricia A.; Conway, Margaret; Daly, Janet;
                          Nicolson, Carolyn; Robertson, James S.; Mills,
                          Kingston H. G.
CORPORATE SOURCE:         Infection and Immunity Group, Department of Biology,
                          National University of Ireland, Maynooth, Ire.
SOURCE:                   International Congress Series (2001),
                          1219(Options for the Control of Influenza IV), 911-915
                          CODEN: EXMDA4; ISSN: 0531-5131
PUBLISHER:                Elsevier Science B.V.
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB    The relative ability of influenza hemagglutinin (HA) DNA vaccines to
      induce cellular and humoral immunity after ≥1 doses and the
      persistence of this response have not been fully elucidated.  HA DNA
      induces a potent Th1 response.  Although this response wanes 12 wk after a
      single immunization, Th1 cells persist in the spleen for at least 6 mo
      after 2 booster immunizations.  In contrast, influenza specific ELISA IgG
      titers reached significant levels only after booster immunizations and HA
      antibodies were generally weak or undetectable.  Nevertheless, 2 doses of
      HA DNA confer almost complete protection against respiratory challenge
      with live virus.
REFERENCE COUNT:          5     THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32  ANSWER 2 OF 23  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2002:102243  CAPLUS
DOCUMENT NUMBER:          136:149857
TITLE:                    DNA immunization against Chlamydia infection
INVENTOR(S):              Brunham, Robert C.
PATENT ASSIGNEE(S):       University of Manitoba, Can.
SOURCE:                   U.S., 55 pp., Cont.-in-part of U.S. 6,235,290.
                          CODEN: USXXAM
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   4
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
     ---------------      ----   --------    --------------------     --------
     US 6344202            B1    20020205    US 1998-55765            19980407
```

US 6235290	B1	20010522	US 1997-893381	19970711	<--
CA 2327434	AA	19991014	CA 1999-2327434	19990407	<--
WO 9951745	A2	19991014	WO 1999-CA292	19990407	<--
WO 9951745	A3	19991202			

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9931336	A1	19991025	AU 1999-31336	19990407	<--
AU 753539	B2	20021024			
EP 1068327	A2	20010117	EP 1999-913035	19990407	<--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP 2002510493	T2	20020409	JP 2000-542458	19990407	
NZ 507976	A	20021220	NZ 1999-507976	19990407	
BR 9909436	A	20040629	BR 1999-9436	19990407	
US 2002142001	A1	20021003	US 2002-36507	20020107	
PRIORITY APPLN. INFO.:			US 1996-21607P	P 19960712	
			US 1997-893381	A2 19970711	
			US 1998-55765	A 19980407	
			WO 1999-CA292	W 19990407	

AB Nucleic acid, including DNA, for immunization to generate a protective immune response in a host, including humans, to a major outer membrane protein of a strain of Chlamydia, preferably contains a nucleotide sequence encoding a MOMP or a MOMP fragment that generates antibodies that specifically react with MOMP and a promoter sequence operatively coupled to the first nucleotide sequence for expression of the MOMP in the host. The non-replicating vector may be formulated with a pharmaceutically-acceptable carrier for in vivo administration to the host.

REFERENCE COUNT: 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:900454 CAPLUS

DOCUMENT NUMBER: 137:77491

TITLE: One-time gene gun or intramuscular rabies DNA vaccination of non-human primates: comparison of neutralizing antibody responses and protection against rabies virus 1 year after vaccination

AUTHOR(S): Lodmell, Donald L.; Parnell, Michael J.; Bailey, John R.; Ewalt, Larry C.; Hanlon, Cathleen A.

CORPORATE SOURCE: Rocky Mountain Laboratories, Laboratory of Persistent Viral Diseases, National Institute of Allergy and Infectious Diseases, Hamilton, MT, 59840, USA

SOURCE: Vaccine (**2001**), 20(5-6), 838-844
CODEN: VACCDE; ISSN: 0264-410X

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We have previously shown that Macaca fascicularis (Cynomologus) monkeys receiving a primary and either one or two booster rabies DNA vaccinations are protected against rabies virus. In this study, we determined whether monkeys that had been vaccinated only once via gene gun or i.m. with different concns. of DNA would be protected against rabies virus challenge. Neutralizing antibody responses were assayed for 1 yr before the monkeys were challenged. Neutralizing antibody was detected at least 50 days earlier in gene gun vaccinated as compared to i.m. vaccinated animals. Prior to viral challenge, all (6/6, 100%) gene gun vaccinated animals, but only 3/6 (50%) i.m. vaccinated animals seroconverted. In general, antibody titers of the gene gun vaccinated animals were higher

than the titers of the i.m. vaccinated animals. There was no correlation between the concentration of **DNA** used for vaccination, the neutralizing **antibody** responses elicited and **protection** against viral challenge. Seven days after viral challenge, a rapid and strong anamnestic antibody response was elicited in 100% of the gene gun vaccinated monkeys and in four i.m. vaccinated monkeys. Neutralizing antibody remained undetectable in two i.m. vaccinated monkeys. Overall, 60% (3/5) of the gene gun vaccinated animals and 87% (5/6) of the i.m. vaccinated monkeys survived viral challenge. This study is the first, to our knowledge, to show long-term protection of non-human primates against a human viral pathogen using a DNA vaccination protocol that did not include a booster immunization.

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:884706 CAPLUS
DOCUMENT NUMBER: 136:133273
TITLE: Priming by DNA immunization augments T-cell responses induced by modified live bovine herpesvirus vaccine
AUTHOR(S): Loehr, B. I.; Pontarollo, R.; Rankin, R.; Latimer, L.; Willson, P.; Babiuk, L. A.; van Drunen Littel-van den Hurk, S.
CORPORATE SOURCE: Veterinary Infectious Disease Organization, University of Saskatchewan, Saskatoon, SK, S7N 5E3, Can.
SOURCE: Journal of General Virology (**2001**), 82(12), 3035-3043
CODEN: JGVIAY; ISSN: 0022-1317
PUBLISHER: Society for General Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB DNA vaccines have several advantages over conventional vaccines. One of the most important characteristics is the presentation of antigen via both MHC class I and class II receptors. Although this generally results in strong T-cell responses, **antibody** production and **protection** achieved by **DNA** immunization are unfortunately not always adequate. In contrast, modified live virus (MLV) vaccines usually induce adequate antibody and moderate cellular responses, whereas killed vaccines tend to elicit weak immune responses in general. A DNA prime-MLV boost regimen should result in enhanced cellular immunity and possibly improved antibody production To test this hypothesis, plasmids encoding bovine herpesvirus-1 (BHV-1) glycoproteins B and D were delivered by gene gun to the genital mucosa of cattle prior to immunization with modified live BHV-1 vaccine. The immune responses induced were compared to those of an MLV-vaccinated group and a neg. control group. Although significantly enhanced T-cell responses were induced by priming with the DNA vaccine, there was no increase in antibody titers. Similar levels of protection were induced by the MLV vaccine alone and the DNA prime and MLV boost regimen, which suggests that there is no correlation between the induction of T-cell responses and protection from BHV-1 challenge.

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:832893 CAPLUS
DOCUMENT NUMBER: 136:117008
TITLE: Protective mechanisms induced by a japanese encephalitis virus DNA vaccine: requirement for antibody but not CD8+ cytotoxic T-cell responses
AUTHOR(S): Pan, Chien-Hsiung; Chen, Hsin-Wei; Huang, Hui-Wen; Tao, Mi-Hua
CORPORATE SOURCE: Graduate Institute of Life Sciences, National Defense Medical Center, and Institute of Biomedical Sciences, Academia Sinica, Taipei, 11529, Taiwan

SOURCE: Journal of Virology (**2001**), 75(23), 11457-11463
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We have previously shown that a plasmid (pE) encoding the Japanese encephalitis virus (JEV) envelope (E) protein conferred a high level of protection against a lethal viral challenge. In the present study, we used adoptive transfer expts. and gene knockout mice to demonstrate that the **DNA**-induced E-specific **antibody** alone can confer **protection** in the absence of cytotoxic T-lymphocyte (CTL) functions. Plasmid pE administered by either i.m. or gene gun injection produced significant E-specific antibodies, helper T (Th)-cell proliferative responses, and CTL activities. Animals receiving suboptimal DNA vaccination produced low titers of anti-E antibodies and were only partially or not protected from viral challenge, indicating a strong correlation between anti-E antibodies and the protective capacity. This observation was confirmed by adoptive transfer expts. I.v. transfer of E-specific antisera but not crude or T-cell-enriched immune splenocytes to sublethally irradiated hosts conferred protection against a lethal JEV challenge. Furthermore, expts. with gene knockout mice showed that DNA vaccination did not induce anti-E titers and protective immunity in Igμ-/- and I-Aβ-/- mice, whereas in CD8α-/- mice the pE-induced antibody titers and protective rate were comparable to those produced in the wild-type mice. These results demonstrate that the anti-E antibody is the most critical protective component in this JEV challenge model and that production of anti-E antibody by pE DNA vaccine is dependent on the presence of CD4+ T cells but independent of CD8+ T cells.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:43908 CAPLUS
DOCUMENT NUMBER: 135:225477
TITLE: DNA-mediated protection against classical swine fever virus
AUTHOR(S): Yu, X.; Tu, C.; Li, H.; Hu, R.; Chen, C.; Li, Z.; Zhang, M.; Yin, Z.
CORPORATE SOURCE: Department of Virology, Changchun University of Agricultural and Animal Sciences (CUAAS), Changchun, 130062, Peop. Rep. China
SOURCE: Vaccine (**2001**), 19(11-12), 1520-1525
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Four eukaryotic expression plasmids containing the entire E2 gene sequence of classical swine fever virus (CSFV) were constructed: (a) pcDST, with 5' signal and 3' transmembrane sequences; (b) pcDSW, with 5' signal sequence only; (c) pcDWT, with transmembrane sequences only; and (d) pcDWW, containing the E2 gene alone. All four plasmids were readily transfected into BHK-21 cells, with pcDST and pcDSW resulting in secretion of E2 antigen. The latter two plasmids were also shown to induce a humoral immune response against CSFV in mice when administered i.m., but no immune responses were detected with either pcDWT or pcDWW. The antibody level elicited by pcDSW was higher than that induced by pcDST. When pcDSW was used to immunize rabbits and pigs, both species were shown to be protected from challenge with virulent CSFV (hog cholera lapinized virus for rabbits and Shimen strain for pigs).

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:604618 CAPLUS
DOCUMENT NUMBER: 134:294198
TITLE: Immunization of BALB/c mice with DNA encoding equine herpesvirus 1 (EHV-1) glycoprotein D affords partial protection in a model of EHV-1-induced abortion
AUTHOR(S): Walker, C.; Ruitenberg, K. M.; Love, D. N.; Whalley, J. M.
CORPORATE SOURCE: Division of Environmental and Life Sciences, Department of Biological Sciences, Macquarie University, Sydney, 2109, Australia
SOURCE: Veterinary Microbiology (**2000**), 76(3), 211-220
CODEN: VMICDQ; ISSN: 0378-1135
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB DNA-mediated immunization was assessed in a murine model of equine herpesvirus 1 (EHV-1) abortion. While there are differences between the model and natural infection in the horse, literature suggests that EHV-1 infection of pregnant mice can be used to assess the potential ability of vaccine candidates to protect against abortion. Female BALB/c mice were inoculated twice, 4 wk apart, with an expression vector encoding EHV-1 glycoprotein D (gD DNA). They were mated 15 days after the second inoculation, challenged at day 15 of pregnancy and killed 3 days later. The gD DNA-inoculated mice had fewer fetuses which were damaged or had died in utero (6% in gD DNA, 21% vector DNA and 28% in nil inoculated groups challenged with EHV-1), a reduction in the stunting effect of EHV-1 infection on fetuses (gD DNA: 0.40g±0.06, vector DNA: 0.34g±0.10), reduced placental and herpesvirus-specific lung histopathol. and a lower titer of virus (TCID50±SEM/lung) in maternal lung than control groups (gD DNA 4.7±0.3, vector 5.3±0.2, nil 5.6±0.2). Maternal antibody to EHV-1 gD was demonstrated in pups born to a dam inoculated 123 days earlier with gD DNA. Although protection from abortion was incomplete, immunization of mice with gD DNA demonstrated encouragingly the potential of this vaccine strategy.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 8 OF 23 CAPLUS
ACCESSION NUMBER: 2000:575045 CAPLUS
DOCUMENT NUMBER: 134:146031
TITLE: A dengue virus serotype-1 **DNA** vaccine induces virus neutralizing **antibodies** and provides **protection** from viral challenge in Aotus monkeys
AUTHOR(S): Kochel, T. J.; Raviprakash, K.; Hayes, C. G.; Watts, D. M.; Russell, K. L.; Gozalo, A. S.; Phillips, I. A.; Ewing, D. F.; Murphy, G. S.; Porter, K. R.
CORPORATE SOURCE: Naval Medical Research Center, Virology Program, Bethesda, MD, 20889-5607, USA
SOURCE: Vaccine (**2000**), 18(27), 3166-3173
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A DNA vaccine that expresses the premembrane/membrane (prM) and envelope (E) genes of dengue virus serotype-1 was tested for immunogenicity and protection against dengue-1 virus challenge in Aotus nancymae monkeys. The vaccine, in 1 mg doses, was administered intradermally (ID) to three monkeys and i.m. (IM) to three others. For controls, a 1 mg dose of vector DNA was administered ID to two monkeys and IM to one. All animals were primed and then boosted at one and five months post priming. Sera were collected monthly and analyzed for dengue-1 antibodies by enzyme linked immunosorbent assay (ELISA) and plaque reduction neutralization test

(PRNT). Dengue-1 antibodies were detectable in the sera from ID and IM vaccine inoculated animals one month after the first boost and peaked one month after the second boost. The antibody levels from sera of animals that received the vaccine via the ID route were twice those from sera of animals that received the vaccine via the IM route. Six months after the second boost all inoculated and two naive monkeys were challenged with 1.25 + 104 plaque forming units (PFU) of dengue-1 virus. Two vaccine immunized animals were protected from viremia while the others showed a reduction in viremia. The mean days of viremia were 1 and 1.3 for the animals that were immunized with the vaccine via the ID or IM route, resp. vs 4 and 2 mean days of viremia in the animals inoculated with control DNA. Naive animals were viremic for an average of 4 days. All of the three control monkeys that received control DNA inoculum by either the ID or IM route had an intermittent viremia pattern with one or more neg. days interspersed between the pos. days. This pattern was not observed in any of the vaccine recipients or the naive control monkeys. These results demonstrate that DNA immunization is a promising approach for the development of dengue vaccines and that A. nancymae monkeys are suitable for dengue vaccine trials.

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:557582 CAPLUS
DOCUMENT NUMBER: 133:250972
TITLE: C3d enhancement of antibodies to hemagglutinin accelerates protection against influenza virus challenge
AUTHOR(S): Ross, Ted M.; Xu, Yan; Bright, Rick A.; Robinson, Harriet L.
CORPORATE SOURCE: Yerkes Regional Primate Research Center, Division Of Microbiology and Immunology, Emory University, Atlanta, GA, 30329, USA
SOURCE: Nature Immunology (**2000**), 1(2), 127-131
CODEN: NIAMCZ; ISSN: 1529-2908
PUBLISHER: Nature America Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The ability of the C3d component of complement to enhance antibody responses and protective immunity to influenza virus challenges was evaluated using a DNA vaccine encoding a C3d fusion of the hemagglutinin (HA) from influenza virus. Plasmids were generated that encoded a transmembrane HA (tmHA), a secreted form of HA (sHA), or a sHA fused to 3 tandem copies of the murine homolog of the C3d (sHA-3C3d). Anal. of the titers, avidity maturation, and hemagglutinin-inhibition activity of raised antibody revealed that immunizations with sHA-3C3d DNA accelerated both the avidity maturation of antibody to HA and the appearance of hemagglutinin-inhibition activity. These accelerated antibody responses correlated to a more rapid appearance of protective immunity. They also correlated to complete protection from live virus challenge by a single vaccination at a dose 10-fold lower than the protective dose for non-C3d forms of HA.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:657157 CAPLUS
DOCUMENT NUMBER: 132:150370
TITLE: Immunization with plasmid DNA encoding the envelope glycoprotein of Japanese Encephalitis virus confers significant protection against intracerebral viral challenge without inducing detectable antiviral antibodies
AUTHOR(S): Ashok, M. S.; Rangarajan, P. N.

CORPORATE SOURCE: Department of Biochemistry, Indian Institute of Science, Bangalore, 560 012, India
SOURCE: Vaccine (**1999**), 18(1-2), 68-75
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A plasmid DNA construct, pCMXENV encoding the envelope (E) glycoprotein of Japanese Encephalitis virus (JEV), was constructed. This plasmid expresses the E protein intracellularly, when transfected into Vero cells in culture. The ability of pCMXENV to protect mice from lethal JEV infection was evaluated using an intracerebral (i.c.) JEV challenge model. Several independent immunization and JEV challenge expts. were carried out and the results indicate that 51 and 59% of the mice are protected from lethal i.c. JEV challenge, when immunized with pCMXENV via i.m. and intranasal (i.n.) routes, resp. None of the mice immunized with the vector DNA (pCMX) survived in any of these expts. JEV-specific antibodies were not detected in pCMXENV-immunized mice either before or after challenge. JEV-specific T cells were observed in mice immunized with pCMXENV which increased significantly after JEV challenge indicating the presence of vaccination-induced memory T cells. Enhanced production of interferon-γ (IFN-γ) and complete absence of interleukin-4 (IL-4) in splenocytes of pCMXENV-immunized mice on restimulation with JEV antigens in vitro indicated that the protection is likely to be mediated by T helper (Th) lymphocytes of the Th1 sub-type. In conclusion, our results demonstrate that immunization with a plasmid DNA expressing an intracellular form of JEV E protein confers significant protection against i.c. JEV challenge even in the absence of detectable antiviral antibodies.

REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:517851 CAPLUS
DOCUMENT NUMBER: 132:48695
TITLE: Genetic immunization of mice with DNA encoding the 23 kDa transmembrane surface protein of Schistosoma japonicum (Sj23) induces antigen-specific immunoglobulin G antibodies
AUTHOR(S): Waine, G. J.; Alarcon, J. B.; Qiu, C.; McManus, D. P.
CORPORATE SOURCE: Molecular Parasitology Unit, Tropical Health Program, Australian Centre for International and Tropical Health and Nutrition, Post Office Royal Brisbane Hospital, The University of Queensland and The Queensland Institute of Medical Research, Herston, 4029, Australia
SOURCE: Parasite Immunology (**1999**), 21(7), 377-381
CODEN: PAIMD8; ISSN: 0141-9838
PUBLISHER: Blackwell Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The 23 kDa transmembrane surface protein of schistosomes is of recognized interest in studies of immune responsiveness in schistosomiasis. To examine the immunogenicity of the 23 kDa antigen of S. japonicum, Sj23, when delivered by genetic immunization, mice were immunized using a DNA construct containing the Sj23 cDNA under the control of a CMV promoter. Serol. anal. of peripheral blood from immunized mice demonstrated that this construct was able to induce the production of antigen-specific IgG antibodies that recognized a schistosome antigen of 23 kDa in Western blots. Despite inducing antigen-specific **antibodies**, the Sj23 **DNA** vaccine was unable to confer **protection** in immunized mice subjected to challenge with S.japonicum cercariae. Appropriate engineering of the unique structure of the Sj23 kDa transmembrane protein of schistosomes may provide a novel vehicle for expressing foreign epitopes from other infectious agents or, possibly, cancer antigens,

anchored to the surface of transfected cells.
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:257575 CAPLUS
DOCUMENT NUMBER: 131:57507
TITLE: DNA vaccination against the idiotype of a murine B cell lymphoma: mechanism of tumor protection
AUTHOR(S): Syrengelas, Athanasia D.; Levy, Ronald
CORPORATE SOURCE: Department of Medicine, Division of Oncology, Stanford University Medical Center, Stanford, CA, 94305, USA
SOURCE: Journal of Immunology (**1999**), 162(8), 4790-4795
CODEN: JOIMA3; ISSN: 0022-1767
PUBLISHER: American Association of Immunologists
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Several studies have shown that immunization with DNA, which encodes the idiotypic determinants of a B cell lymphoma, generates tumor-specific immunity. Although induction of antiidiotypic Abs has correlated with tumor protection, the effector mechanisms that contribute to tumor protection have not been clearly identified. This study evaluated the tumor protective effects of humoral and cellular immune mechanisms recruited by idiotype-directed DNA vaccines in the 38C13 murine B cell lymphoma model. Antiidiotypic Abs induced by DNA vaccination supported in vitro complement-mediated cytotoxicity of tumor cells, and simultaneous transfer of tumor cells and hyperimmune sera protected naive animals against tumor growth. However, in vitro stimulation of immune splenocytes with tumor cells failed to induce idiotype-specific cytotoxicity, and following vaccination, depletion of CD4 or CD8 T cell subsets did not compromise protection. Furthermore, protection of naive recipients against tumor challenge could not be demonstrated either by a Winn assay approach or by adoptive transfer of spleen and lymph node cells. Thus, in this exptl. model, current evidence suggests that the tumor-protective effects of DNA vaccination can be largely attributed to idiotype-specific humoral immunity.
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:801023 CAPLUS
DOCUMENT NUMBER: 130:152318
TITLE: Immunity to p53 induced by an idiotypic network of anti-p53 **antibodies**: generation of sequence-specific anti-**DNA** **antibodies** and **protection** from tumor metastasis
AUTHOR(S): Erez-Alon, Neta; Herkel, Johannes; Wolkowicz, Roland; Ruiz, Pedro J.; Waisman, Ari; Rotter, Varda; Cohen, Irun R.
CORPORATE SOURCE: Departments of Immunology and Molecular Cell Biology, Weizmann Institute of Science, Rehovot, 76100, Israel
SOURCE: Cancer Research (**1998**), 58(23), 5447-5452
CODEN: CNREA8; ISSN: 0008-5472
PUBLISHER: AACR Subscription Office
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The general overexpression of p53 by different types of tumor cells suggests that p53 immunity might be generally useful for tumor immunotherapy. The authors describe here the induction of immunity to p53 and resistance to tumor metastasis using an idiotypic network. Mice were immunized with domain-specific anti-p53 monoclonal antibodies (Ab1): PAb-248 directed to the N-terminus; PAb-246 directed to the specific

DNA-binding region; or PAb-240 directed to a mutant p53 that does not bind specific DNA. Immunized mice responded by making anti-idiotypic antibodies (Ab2) specific for the Ab1 inducer. Ab1 PAb-246 induced Ab2 that, like p53 itself, could bind the specific DNA oligonucleotide sequence of the p53 responsive element. Mice immunized with Ab1 PAb-240 or PAb-246 spontaneously made Ab3 anti-p53 antibodies that reflected the specificity of their Ab1 inducers: Ab1 PAb-246 induced Ab3 specific for wild-type p53; PAb-240 induced Ab3 specific for mutant p53. Ab1 PAb-248 induced only Ab2. The spontaneously arising Ab3 were of T cell-dependent IgG isotypes. Peptides from the complementarity determining regions of the Ab1 antibodies PAb-240 and PAb-246 could also induce Ab3 anti-p53. Finally, mice that produced Ab3 anti-p53 acquired resistance to tumor metastases. Therefore, an anti-idiotypic network built around certain domains of p53 seems to be programmed within the immune system, specific Ab2 antibodies can mimic the DNA binding domain of p53, and Ab3 network immunity to p53 can be associated with resistance to tumor cells.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:552249 CAPLUS

DOCUMENT NUMBER: 129:314679

TITLE: Comparison of the ability of viral protein-expressing plasmid DNAs to protect against influenza

AUTHOR(S): Chen, Ze; Sahashi, Yasuhiro; Matsuo, Kazutoshi; Asanuma, Hideki; Takahashi, Hidehiro; Iwasaki, Takuya; Suzuki, Yujiro; Aizawa, Chikara; Kurata, Takeshi; Tamura, Shin-Ichi

CORPORATE SOURCE: Department of Pathology, National Institute of Infectious Diseases, Tokyo, 162, Japan

SOURCE: Vaccine (**1998**), 16(16), 1544-1549
CODEN: VACCDE; ISSN: 0264-410X

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The ability of plasmid DNA encoding various influenza viral proteins from the A/PR/8/34 (H1N1) virus to protect against influenza was compared in BALB/c mice. The plasmid DNA encoded hemagglutinin (HA), neuraminidase (NA), matrix protein (M1), nucleoprotein (NP) or nonstructural protein (NS1) in a chicken β-actin-based expression vector (pCAGGS). Each DNA was inoculated twice 3 wk apart at a dose of 1 μg per mouse by particle-mediated DNA transfer to the epidermis (gene gun). Seven days after a second immunization, mice were challenged with the homologous virus and the ability of each DNA to protect mice from influenza was evaluated by decreased lung virus titers and increased survival. Mice, given HA- or NA-expressing DNA, induced a high level of specific antibody response and protected well against the challenge virus. Mice given M1-, NP-, or NS1-DNA failed to provide **protection**, although M1- and NP-**DNAs** did induce detectable **antibody** responses. These results indicate that both HA- and NA-expressing DNAs for the surface glycoproteins are most protective against influenza from among the various viral protein-expressing DNAs used here.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:540492 CAPLUS

DOCUMENT NUMBER: 129:243829

TITLE: DNA vaccination affords significant protection against feline immunodeficiency virus infection without inducing detectable antiviral antibodies

AUTHOR(S): Hosie, Margaret J.; Flynn, J. Norman; Rigby, Mark A.; Cannon, Celia; Dunsford, Thomas; Mackay, Nancy A.; Argyle, David; Willett, Brian J.; Miyazawa, Takayuki;

Onions, David E.; Jarrett, Oswald; Neil, James C.
CORPORATE SOURCE: Retrovirus Research Laboratory, Department of Veterinary Pathology, University of Glasgow, Glasgow, G61 1QH, UK
SOURCE: Journal of Virology (**1998**), 72(9), 7310-7319
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB To test the potential of a multigene DNA vaccine against lentivirus infection, we generated a defective mutant provirus of feline immunodeficiency virus (FIV) with an in-frame deletion in pol (FIVΔRT). In a first experiment, FIVΔRT DNA was administered i.m. to 10 animals, half of which also received feline gamma interferon (IFN-γ) DNA. The DNA was administered in four 100-μg doses at 0, 10, and 23 wk. Immunization with FIVΔRT elicited cytotoxic T-cell (CTL) responses to FIV Gag and Env in the absence of a serol. response. After challenge with homologous virus at week 26, all 10 of the control animals became sero-pos. and viremic but 4 of the 10 vaccinates remained seroneg. and virus free. Furthermore, quant. virus isolation and quant. PCR anal. of viral DNA in peripheral blood mononuclear cells revealed significantly lower virus loads in the FIVΔRT vaccinates than in the controls. Immunization with FIVΔRT in conjunction with IFN-γ gave the highest proportion of protected cats, with only two of five vaccinates showing evidence of infection following challenge. In a second experiment involving two groups (FIVΔRT plus IFN-γ and IFN-γ alone), the immunization schedule was reduced to 0, 4, and 8 wk. Once again, CTL responses were seen prior to challenge in the absence of detectable antibodies. Two of five cats receiving the proviral DNA vaccine were protected against infection, with an overall reduction in virus load compared to the five infected controls. These findings demonstrate that DNA vaccination can elicit protection against lentivirus infection in the absence of a serol. response and suggest the need to reconsider efficacy criteria for lentivirus vaccines.

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:440757 CAPLUS
DOCUMENT NUMBER: 129:215388
TITLE: Are DNA-based vaccines useful for protection against secreted bacterial toxins? Tetanus toxin test case
AUTHOR(S): Saikh, Kamal U.; Sesno, Julie; Brandler, Patricia; Ulrich, Robert G.
CORPORATE SOURCE: Department of Immunology and Molecular Biology, Army Medical Research Institute of Infectious Diseases, Frederick, MD, 21702-5011, USA
SOURCE: Vaccine (**1998**), 16(9/10), 1029-1038
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Polypeptide and DNA vaccine alternatives to the conventional tetanus toxoid were compared. Mouse immunizations with plasmid DNA that encoded the tetanus toxin C fragment polypeptide induced consistently lower antibody responses than direct immunization with the C fragment polypeptide or toxoid, yet provided some degree of protection from a lethal toxin challenge. Cytotoxic T-cell responses dominated DNA immunizations, while specific T-cell proliferation resulted from all vaccines tested. Immune responses to the DNA vaccine exhibited a T-helper type-1 propensity, while polypeptides elicited T-helper type-2 responses. The lower antibody response to the plasmid vaccine was not due to insufficient quantity of C fragment in vivo but was likely the result of a mode of antigen presentation that was less efficient for supporting

antibody production Collectively, these results suggest that polypeptide or toxoid vaccines are preferable to plasmid-based vaccination for control of diseases caused by tetanus toxin.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L32 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:839707 CAPLUS
DOCUMENT NUMBER: 123:283060
TITLE: Humoral immune responses to influenza hemagglutinin by DNA vaccination
AUTHOR(S): Deck, R. Randall; DeWitt, Corrille M.; Donnelly, John J.; Liu, Margaret A.; Ulmer, Jeffrey B.
CORPORATE SOURCE: Merck Research Laboratories, Department Virus and Cell Biology, West Point, PA, 19486, USA
SOURCE: Vaccines 95: Molecular Approaches to the Control of Infectious Diseases, [Annual Meeting on Molecular Approaches to the Control of Infectious Diseases], 12th, Cold Spring Harbor, N. Y., Oct., 1994 (**1995**), Meeting Date 1994, 91-4. Editor(s): Chanock, Robert M. Cold Spring Harbor Laboratory Press: Cold Spring Harbor, N. Y.
CODEN: 61TGAQ
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Humoral response in mice to influenza HA after DNA vaccination was evaluated, and the effect of dosage and injection regimen of **DNA** on **antibody** response and **protection** from lethal influenza virus challenge was studied. Antibody responses generated were dependent on dose and number of injections. Antibody levels resulting from either one, two, or three injections were statistically indistinguishable and were maintained at that level for at least 1 yr.

L32 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:456489 CAPLUS
DOCUMENT NUMBER: 105:56489
TITLE: Chemical footprinting of the interaction between left-handed Z-DNA and anti-Z-DNA antibodies by diethylpyrocarbonate carbethoxylation
AUTHOR(S): Runkel, Laura; Nordheim, Alfred
CORPORATE SOURCE: Zent. Mol. Biol., Univ. Heidelberg, Heidelberg, D-6900, Fed. Rep. Ger.
SOURCE: Journal of Molecular Biology (**1986**), 189(3), 487-501
CODEN: JMOBAK; ISSN: 0022-2836
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Diethylpyrocarbonate (DEPC) carbethoxylates Z-DNA to an increased extent because the reactive N-7 atoms of purine residues appear structurally more accessible on Z-DNA as opposed to B-DNA. This chemical probe was used in DEPC footprinting expts., which confirmed the specificity of binding of anti-Z-DNA monoclonal antibodies and which probed regions of close contact in this DNA-protein complex. **Antibody** binding to segments of Z-**DNA** existing in supercoiled plasmids resulted in specific **protection** from DEPC hyperreactivity within the Z-DNA segment and induction of hyperreactivity in purines lying adjacent to the Z-segment. Two different monoclonal Ig prepns., Z22 and Z44, generated specific and distinct footprint patterns when bound to the Z-helix. The binding of these antibodies also affected DNA conformation within the Z-DNA segment by influencing the equilibrium between the B- and Z-helical conformations.

L32 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:453039 CAPLUS
DOCUMENT NUMBER: 101:53039

TITLE: **DNA**-anti-**DNA** immune complexes. **Antibody protection** of a discrete **DNA** fragment from DNase digestion in vitro
AUTHOR(S): Emlen, W.; Ansari, R.; Burdick, G.
CORPORATE SOURCE: Pac. Med. Cent., Univ. Washington, Seattle, WA, 98144, USA
SOURCE: Journal of Clinical Investigation (**1984**), 74(1), 185-90
CODEN: JCINAO; ISSN: 0021-9738
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The ability of DNase I to digest DNA contained in DNA-anti-DNA immune complexes was examined IgG isolated from the sera of 20 patients with systemic lupus erythematosus (SLE) and containing antibodies to DNA was incubated with double-stranded DNA to form immune complexes. Excess DNase was added, and digestion of DNA was monitored by the conversion of DNA to TCA-soluble products. IgG from 8 of the 20 SLE patients protected DNA from degradation by DNase in direct proportion to the amount of DNA bound to IgG. The DNA protected from degradation by these sera remained bound to IgG during digestion and was 35-45 base pairs in size. The size of this fragment is the same as that which has been proposed to be the minimal size necessary for monogamous bivalent binding of IgG to DNA. Therefore, the ability of F(ab')2 and Fab' to protect DNA from DNase digestion was compared; the bivalent F(ab')2 fragments were protective, but the univalent Fab' fragments were not. Apparently, some antibodies to DNA that bind to DNA via monogamous bivalent binding can protect a 35-45-base pair DNA fragment from DNase digestion. The implications of this finding are discussed with regard to the in vivo behavior and potential pathogenicity of small DNA-anti-DNA immune complexes.

L32 ANSWER 20 OF 23 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
ACCESSION NUMBER: 2001:33064384 BIOTECHNO
TITLE: Nucleic acid vaccines: Tasks and tactics
AUTHOR: McKenzie B.S.; Corbett A.J.; Brady J.L.; Dyer C.M.; Strugnell R.A.; Kent S.J.; Kramer D.R.; Boyle J.S.; Lew A.M.
CORPORATE SOURCE: Dr. A.M. Lew, WEHI, P.O. RMH, Parkville, Vic. 3050, Australia.
E-mail: lew@wehi.edu.au
SOURCE: Immunologic Research, (**2001**), 24/3 (225-244), 191 reference(s)
CODEN: IMRSEB ISSN: 0257-277X
DOCUMENT TYPE: Journal; General Review
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2001:33064384 BIOTECHNO

AB There are no adequate vaccines against some of the new or reemerged infectious scourges such as HIV and TB. They may require strong and enduring cell-mediated immunity to be elicited. This is quite a task, as the only known basis of **protection** by current commercial vaccines is **antibody**. As **DNA** or RNA vaccines may induce both cell-mediated and humoral immunity, great interest has been shown in them. However, doubt remains whether their efficacy will suffice for their clinical realization. We look at the various tactics to increase the potency of nucleic acid vaccines and divided them broadly under those affecting delivery and those affecting immune induction. For delivery, we have considered ways of improving uptake and the use of bacterial, replicon or viral vectors. For immune induction, we considered aspects of immunostimulatory CpG motifs, coinjection of cytokines or costimulators and alterations of the antigen, its cellular localization and its anatomical localization including the use of ligand-targeting to lymphoid tissue. We also thought that mucosal application of DNA deserved a separate section. In this review, we have taken the liberty to discuss

these enhancement methods, whenever possible, in the context of the underlying mechanisms that might argue for or against these strategies.

L32 ANSWER 21 OF 23 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
ACCESSION NUMBER: 2000:30813190 BIOTECHNO
TITLE: Molecular pathway of germ cell apoptosis following ischemia/reperfusion of the rat testis
AUTHOR: Lysiak J.J.; Turner S.D.; Turner T.T.
CORPORATE SOURCE: J.J. Lysiak, Department of Urology, Box 422, Univ. of Virginia Hlth. Sci. Center, Charlottesville, VA 22908, United States.
E-mail: jl6n@virginia.edu
SOURCE: Biology of Reproduction, (**2000**), 63/5 (1465-1472), 45 reference(s)
CODEN: BIREBV ISSN: 0006-3363
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2000:30813190 BIOTECHNO
AB The present study investigates the molecular apoptotic pathway in germ cells following acute ischemia of the rat testis. Rats were subjected to ischemia-inducing torsion and testes were harvested after reperfusion. Apoptotic cells were identified with an **antibody** to single-stranded **DNA**. Seminiferous tubule RNA was examined by RNase **protection** assay or by reverse transcriptase-polymerase chain reaction (RT-PCR) for the presence and regulation of apoptotic molecules. Proteins from seminiferous tubules were used for Western blot analysis of cytochrome c. Germ cell apoptosis was maximal at 24 h after repair of torsion. Germ cells in stages II-III of the seminiferous epithelium cycle were the predominant early responders. The RNase protection assays revealed that Bcl-X(L) was the prominent mRNA species. Caspases 1, 2, 3, and Bax mRNA were consistently upregulated; however, the time of upregulation after torsion was variable. The Bcl-X(L) and Bcl-X(S) mRNAs were less consistently upregulated and there was no evidence for upregulation of Fas or Bcl-2. Fas ligand (FasL) was not detected by RNase protection assay, but RT-PCR revealed a significant increase in FasL expression 4 h after the repair of torsion. Western blot analysis for cytochrome c release demonstrated a significant increase 4 h after the repair of torsion. Results suggest that germ cell apoptosis following ischemia/reperfusion of the rat testis is initiated through the mitochondria-associated molecule Bax as well as Fas-FasL interactions.

L32 ANSWER 22 OF 23 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
ACCESSION NUMBER: 2000:30108489 BIOTECHNO
TITLE: Cloning of the gene encoding a 22-kilodalton cell surface antigen of Mycobacterium bovis BCG and analysis of its potential for DNA vaccination against tuberculosis
AUTHOR: Lefevre P.; Denis O.; De Wit L.; Tanghe A.; Vandenbussche P.; Content J.; Huygen K.
CORPORATE SOURCE: K. Huygen, Pasteur Institute of Brussels, Lab. of Mycobacterial Immunology, 642 Engelandstraat, 1180 Brussels, Belgium.
E-mail: chuygen@ben.vub.ac.be
SOURCE: Infection and Immunity, (**2000**), 68/3 (1040-1047), 41 reference(s)
CODEN: INFIBR ISSN: 0019-9567
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2000:30108489 BIOTECHNO
AB Using spleen cells from mice vaccinated with live Mycobacterium bovis

BCG, we previously generated three monoclonal antibodies reactive against a 22-kDa protein present in mycobacterial culture filtrate (CF) (K. Huygen et al., Infect. Immun. 61:2687-2693, 1993). These monoclonal antibodies were used to screen an M. bovis BCG genomic library made in phage λgt11. The gene encoding a 233-amino-acid (aa) protein, including a putative 26-aa signal sequence, was isolated, and sequence analysis indicated that the protein was 98% identical with the M. tuberculosis Lppx protein and that it contained a sequence 94% identical with the M. leprae 38-mer polypeptide 13B3 recognized by T cells from killed M. leprae-immunized subjects. Flow cytometry and cell fractionation demonstrated that the 22-kDa CF protein is also highly expressed in the bacterial cell wall and membrane compartment but not in the cytosol. C57BL/6, C3H, and BALB/c mice were vaccinated with plasmid DNA encoding the 22-kDa protein and analyzed for immune response and **protection** against intravenous M. tuberculosis challenge. Whereas **DNA** vaccination induced elevated **antibody** responses in C57BL/6 and particularly in C3H mice, Th1-type cytokine response, as measured by interleukin-2 and gamma interferon secretion, was only modest, and no protection against intravenous M. tuberculosis challenge was observed in any of the three mouse strains tested. Therefore, the 22-kDa antigen seems to have little potential for a DNA vaccine against tuberculosis, but it may be a good candidate for a mycobacterial antigen detection test.

L32 ANSWER 23 OF 23 BIOTECHNO COPYRIGHT 2004 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1996:26317331 BIOTECHNO
TITLE: Humoral and cellular immunities elicited by DNA vaccines: Application to the human immunodeficiency virus and influenza
AUTHOR: Shiver J.W.; Ulmer J.B.; Donnelly J.J.; Liu M.A.
CORPORATE SOURCE: Department of Virus/Cell Biology, Merck Research Laboratories,West Point, PA 19486, United States.
SOURCE: Advanced Drug Delivery Reviews, (**1996**), 21/1 (19-31)
CODEN: ADDREP ISSN: 0169-409X
DOCUMENT TYPE: Journal; General Review
COUNTRY: Netherlands
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1996:26317331 BIOTECHNO
AB Vaccines comprised of plasmid DNA constructs providing expression of cDNA-encoded antigens elicit potent humoral and cellular immunities in animals including major histocompatibility complex (MHC) I-restricted cytotoxic T lymphocyte (CTL) responses. This approach has been exemplified by experiments demonstrating protection of mice and ferrets from influenza infection: DNA vaccines encoding the influenza nucleoprotein (NP) gene protected against cross-strain challenge by cellular immunities while vaccines encoding hemagglutinin (HA) provided **antibody**-mediated **protection** to homologous virus.
DNA vaccines, expressing either HIV-1 gp120 or rev, were also used to vaccinate mice and nonhuman primates. Both CTL and type 1-like T lymphocyte (Th1) immunities as well as gp120-specific antibodies were elicited by DNA vaccination. The ability of DNA vaccines to readily elicit both CTLs and antibodies distinguish them from conventional vaccines comprised of killed virus or purified antigen and make them an attractive vaccine approach to test with many microbial pathogens.

=> DNA(P)adduct(P)antibody
L33 479 FILE CAPLUS
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'DNA(P)ADDUCT'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'ADDUCT(P)ANTIBODY'

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L34         278 FILE BIOTECHNO
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'DNA(P)ADDUCT'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'ADDUCT(P)ANTIBODY'
L35          13 FILE COMPENDEX
L36          19 FILE ANABSTR
L37           0 FILE CERAB
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'DNA(P)ADDUCT'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'ADDUCT(P)ANTIBODY'
L38           0 FILE METADEX
L39         110 FILE USPATFULL

TOTAL FOR ALL FILES
L40         899 DNA(P) ADDUCT(P) ANTIBODY

=> l40 and (2' or 3')
L41          32 FILE CAPLUS
L42           0 FILE BIOTECHNO
L43           0 FILE COMPENDEX
L44           0 FILE ANABSTR
L45           0 FILE CERAB
L46           0 FILE METADEX
L47          86 FILE USPATFULL

TOTAL FOR ALL FILES
L48         118 L40 AND (2' OR 3')
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